Picatinny Arsenal Environmental Restoration Advisory Board
Meeting Minutes, Thursday, April 30, 2015
Cannon Gate Conference Center – Picatinny Arsenal, New Jersey

Attendees

Name	**Organization**
Members	
Ted Gabel	Government Co-Chair, Picatinny Arsenal
Mark Hiler	Community Co-Chair, Rockaway Twp. Env. Commisssion
Tom Brackin	Community Member, Rockaway Township
Bruce D'Adamo	Community Member, Denville Township
David Forti	Community Member, Rockaway
Pat Matarazzo	Community Member, Township of Verona; NJ Clean Water Council
Virginia Michelin	Official representative, Morris County, Division of Planning and Preservation
Anne Pavelka	NJ Department of Environmental Protection (NJDEP)
Robert Rutan	Official representative, Town of Dover
Cara Sileno	Official representative of Rockaway Township
Tom Trapasso	Official representative, Borough of Rockaway
Henry Van Dyke	Community Member, Borough of Rockaway
Lisa Voyce	Community Member
Members of the Public, Support Staff for RAB, Picatinny, EPA and NJDEP	
Bryan Coward	Rockaway Township, Department of Health
Tom Solecki	Picatinny Environmental Management Division
Frank Misurelli	Picatinny Public Affairs Office
Larry Brady	Picatinny Legal
Nancy Flaherty	Army Corps of Engineers
Neil Julian	Picatinny/ARDEC
George Stafford	NJ Highlands Coalition
Ola Awosika	Parsons
Mayble Abraham	Community Member
Marilyn Devries	Chugach
Katrina Harris	Bridge Consulting Corp.

Mr. Ted Gabel convened the meeting at 7:06 p.m. He welcomed all to the meeting and thanked everyone for attending.

Attendance

Ms. Harris took attendance of the Restoration Advisory Board (RAB) members. Mr. Gabel invited all others present to introduce themselves.

Correspondence

Mr. Gabel advised an email had been received from Mr. Michael Glaab, RAB community member, earlier in the evening. Mr. Mark Hiler suggested he and Mr. Gabel jointly respond to Mr. Glaab's email, and Mr. Gabel agreed.

Resolutions, Motions, Significant Events

- The next meeting was tentatively scheduled for September or October 2015.
- The next meeting will include election of the community co-chair.

Old Business

Mr. Gabel stated there were no Old Business items. He noted previous meeting minutes had been approved by email so they could be closed out under the ARCADIS contract which expired December 31, 2014.

Agenda

Slides 1 and 2 (of Mr. Gabel's presentation): **Agenda for April 30th Picatinny Arsenal RAB**

Mr. Gabel reviewed the meeting agenda.

Slides 3 - 4: Proposed RAB Charter Updates

Mr. Gabel said the Garrison Commander had attended the last RAB meeting and then invited Mr. Gabel to brief Gen. Burden about the RAB. He noted Gen. Burden asked to see the RAB Charter which Mr. Gabel provided and which was dated 1996. Mr. Gabel stated the Charter needed to be reviewed and updated, including changes required by the RAB Rule which was put in place after 1996.

Mr. Gabel advised Mr. Hiler, Ms. Harris and himself had discussed some proposed changes which were listed on the slides and which had been emailed to the Board the previous day.

Mr. Gabel reminded the Board that the Charter is primarily developed by the community members and not the Army or regulators, although the RAB Rule needs to be reflected in the Charter.

Mr. Gabel commented on the section of the current Charter which mentions trying to achieve consensus. He noted this could apply to administrative issues but not to environmental issues as the Army is open to all opinions.

Mr. Hiler suggested the Board review the Charter, send any suggested changes or comments to Ms. Harris, and then it would be discussed at the next meeting and voted upon at the following meeting. Mr. Hiler said the Charter could be voted upon with one vote, or a vote could be taken for each proposed change. Ms. Harris advised hard copies of the Charter were available for anyone who would like a hard copy.

Slides 5-7: Picatinny Environmental Restoration Program Web Page

Mr. Gabel showed a draft version of Picatinny's new Environmental Restoration Program Web Page and noted it would be live and available to the public in a few weeks. He introduced Ms. Marilyn Devries from Chugach who has been instrumental in developing the Web Page. Mr. Gabel reviewed the components of the Web Page which had been presented at the October 2014 meeting: background and CERCLA process, public notice link, RAB information, Installation Restoration Program information, Military Munitions Response Program information, a picture catalog, and links to EPA and NJDEP web sites. Mr. Gabel said the RAB meeting minutes and presentations would be on the site and would continue to be added. He noted some of the documents prepared by the Technical Assistance for Public Participation contractor are on the site, as well as a link to Mr. Glaab's web site where there is older material and documents.

Mr. Gabel advised the Public Notice Link will have information about public meetings, a copy of any documents released for formal public comment, and a way to provide comments through the web site during formal public comment periods. Mr. Hiler asked if the notices would still be in the newspapers, and Mr. Gabel advised there is still a legal requirement to have the notices in the newspapers, and copies of the documents released for formal public comment will still be at the libraries.

Mr. Gabel displayed the portion of the web site which displayed many of the environmental program's historical documents including Records of Decision, Remedial Investigations, Feasibility Studies, and Five-Year Reviews.

Mr. Gabel showed a GIS placeholder where he is planning to have a map of Picatinny showing all the environmental sites; when a person clicks on a site, they will be able to see the documents related to that site.

Mr. David Fort asked if NJDEP and EPA correspondence would be on the site; in response to a question, he clarified that he was mainly looking for NJDEP and EPA comments on key documents such as Proposed Plans and some reports. Mr. Gabel said he would look into adding such correspondence.

Mr. Gabel said he would notify the RAB when the site is live.

Slide 1 (of Mr. Tannenbaum's presentation), CERCLA Health Risk Assessment: Mr. Gabel introduced Mr. Larry Tannenbaum, of the U.S. Army Public Health Command. Mr. Gabel advised Mr. Tannenbaum had been very instrumental in reviewing Picatinny's human health and ecological risk assessments over the years. Mr. Gabel noted Mr. Tannenbaum had recently published a book on ecological risk assessment. Mr. Tannenbaum gave a short overview of his background, noting he had previously worked for EPA Region 2 and is now with the US Army Public Health Command. He advised this Command is the Army agency that reviews and approves Army risk assessments.

Slide 2: Mr. Tannenbaum reviewed the topics he would cover in his presentation. He stated he would be discussing only human health risk assessments at this meeting, and not ecological risk assessments.

Slides 3-4: Mr. Tannenbaum discussed a few acronyms he would be using in his presentation, including Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) also known as Superfund, and the National Priorities List (NPL). Mr. Gabel noted the Department of Defense has a separate fund for environmental restoration, and the funding does not come from the Superfund. Mr. Tannenbaum stated Picatinny Arsenal was added to the NPL in 1990. Mr. Gabel added that all of Picatinny was added to the NPL.

Slide 5: Mr. Tannenbaum displayed a chart showing the number of sites proposed, listed, and deleted from the NPL.

Slides 6-7: Mr. Tannenbaum stated NPL sites must follow the National Contingency Plan (NCP) and must have CERCLA risk assessments done which follow EPA risk assessment guidance. Mr. Tannenbaum showed the cover of EPA's risk assessment guidance manual.

Slide 8: Mr. Tannenbaum noted the risk assessment type he would be discussing in his presentation is called a Baseline Risk Assessment; it looks at the site as it is currently, without any interventions made to minimize human exposures to chemicals.

Slides 9-11: Mr. Tannenbaum discussed what "risk" means, noting every aspect of life has an element of risk associated with it. He defined risk as the probability or likelihood of there being a negative outcome. He said risk is measurable or estimable and is necessarily negative—it is the thing that you do not want to happen. Mr. Tannenbaum gave some examples of activities and associated risks.

Slides 12-13: Mr. Tannenbaum defined "risk assessment" as the process or method of determining how much risk is associated with an action or behavior. He said a complete risk assessment is made up of a human health and an ecological risk assessment, but this presentation only covers human health risk assessments. Mr. Tannenbaum said a health risk assessment looks at the probability of a human developing a health effect from having chemical exposures at a contaminated site. Mr. Tannenbaum gave several examples of the types of issues that might be included in a risk assessment.

Slides 15-16: Mr. Tannenbaum discussed "risk management." He gave several examples of risk management in daily life. Mr. Tannenbaum said good risk communication is important throughout the risk assessment and risk management processes.

Slide 17: Mr. Tannenbaum stated there are four steps in the human health risk assessment process: data collection/hazard identification; exposure assessment; toxicity assessment; and risk characterization. He noted NJDEP has a different approach which he would discuss later in his presentation.

Slides 18-20: Mr. Tannenbaum explained the data collection/hazard identification step involves acquiring reliable chemical release and exposure data (such as soil samples and depth to groundwater). He said to identify the site-specific hazards, there needs to be a Conceptual Site Model which is a narrative and graphical expression of site conditions.

Slides 21-23: Mr. Tannenbaum stated samples are analyzed for naturally occurring chemicals, such as metals, and results are generally reported in parts per million. He said samples are also analyzed for chemicals which do not occur naturally such as volatile compounds and pesticides; the results for these chemicals are generally reported in parts per billion. Mr. Tannenbaum said the types of media which can be sampled are soil, surface water, sediment, groundwater, air and living tissue (such as plants, worms or mice). He stated the Conceptual Site Model will help determine which media needs to be sampled.

Slide 24-28: Mr. Tannenbaum explained that screening is done to determine if a chemical might be present at a problematic concentration and therefore needs to be carried through a risk assessment. He showed a graphic which depicted initially looking at every detected chemical at a site and narrowing them down to chemicals of potential concern. He explained the first screening tool is usually to look at the frequency of detection (how often the chemical is detected). He said the rule is a chemical needs to be present in five percent of the samples to be retained for further screening. He continued explaining that for naturally occurring inorganic compounds, the highest detection is compared against a value that is two times the mean chemical concentration found in the local background or a non-contaminated area. Mr. Tannenbaum explained a screening process for any chemical is to compare the concentration against a risk-based concentration if such a standard exists.

Slides 29-32: Mr. Tannenbaum discussed the second step in the health risk assessment process—exposure assessment. He explained who specifically is exposed is assessed during this step, for example, is it an office worker, a construction worker, a child, an adult, an off-site resident. He stated how and how often they are exposed is also assessed, along with the route of exposure—either ingestion, inhalation or dermal contact. Mr. Tannenbaum displayed a chart showing a sample exposure pathway analysis and said some exposure pathways may not be complete and would not move forward in the assessment. He stated an important part of any risk assessment is reasonableness and best professional judgment.

Slides 33-37: Mr. Tannenbaum said the third step is toxicity assessment which assesses what toxic effects are of concern. He noted there are two categories: cancer (all kinds of cancer are grouped together) and non-cancer or systemic effects. He explained there are acute (effects

which happen in under two weeks) and chronic effects, with chronic effects being the primary issue in CERCLA health risk assessments. Mr. Tannenbaum said all cancers are grouped together as the commonality is something goes awry with cells. He said some non-cancer effects are heart arrhythmia, kidney disease and alopecia. He explained that toxicity factors are expressed as a slope factor for cancer and a reference dose for non-cancer. He noted the toxicity factors come from various animal studies, and there is uncertainty with these, although it may be offset by being conservative.

Slides 38-40: Mr. Tannenbaum next discussed the fourth step in the process—risk characterization. He explained all of the information gathered in the first three steps is used to quantitatively express the risk assessment findings. He said the cancer assessment results in the incremental lifetime cancer risk and the non-cancer assessment results in the hazard quotient or hazard index. Mr. Tannenbaum explained the cancer risk is in addition to the country's background risk which is one in three to one in four people will develop cancer during their lifetime. Mr. Tannenbaum said the chemical intake is paired up with the appropriate toxicity factor; he displayed and explained the equation used for this calculation.

Slides 41-43: Mr. Tannenbaum said the risk assessment outcomes are expressed as cancer risk and non-cancer hazard. He explained for cancer risk there is a two order-of-magnitude risk range of acceptability—10^{-4} to 10^{-6} or one in 10,000 to one in 1,000,000. He continued explaining that if a risk assessment shows a risk level of 10^{-4} that is usually the trigger for the need to take remedial action. He noted the two order-of-magnitude risk range provides some flexibility on when there is a need to take action. He noted the risk level of 10^{-4} means there is an additional risk of one person in ten thousand developing cancer beyond the background risk. Mr. Tannenbaum stated these numbers are used by both EPA and NJDEP. Mr. Tannenbaum discussed the non-cancer hazard and stated it is expressed as a hazard quotient; if it is less than one, it is not considered a hazard. He noted that some chemicals can pose both a cancer risk and a non-cancer hazard.

Slides 44-46: Mr. Tannenbaum displayed a chart showing cancer risk for various media and exposure pathways and explained they are added together for a total risk; however, it is also possible to determine which media is causing the risk. Mr. Tannenbaum displayed a chart showing the non-cancer hazard quotients and noted the numbers are also added together only where they are affecting the same target organs.

Slides 47-49: Mr. Tannenbaum discussed the differences between the EPA risk assessment process he had just explained and how NJDEP assesses risk. He explained in soil NJDEP applies Soil Remediation Standards Guidance to each sampling point. He stated there are residential direct contact soil cleanup criteria and non-residential direct contact soil cleanup criteria. He stated while individual sample locations might have concentrations that exceed a risk-based level, an overall representative site concentration is more reflective of the site condition and might not indicate a potential health risk.

Ms. Anne Pavelka commented that New Jersey now has soil remediation standards, not criteria.

Ms. Mayble Abraham commented that it was her understanding that New Jersey began allowing sampling results to be averaged over an area.

Mr. Tannenbaum said a key difference remains that the EPA risk assessment process includes looking at who would possibly be exposed and the exposure pathways.

Mr. Pat Matarazzo commented on the New Jersey standards and cases where there are concentrations below the detection limits; he noted there sometimes seems to be a disconnect. Ms. Lisa Voyce noted there are more aspects to conducting a risk assessment than had been discussed. She mentioned a preliminary step is to do a data usability analysis which often answers many questions before the risk calculations are begun. Ms. Voyce stated she is a member of the committee involved with revising the New Jersey Standards for soil and groundwater, and there are many factors that are taken into consideration in setting a standard such as exposure pathways.

Installation Restoration Program and Military Munitions Response Program Updates:

Slides 8-11 (of Mr. Gabel's presentation): Mr. Gabel reminded the Board that the site visit conducted prior to the last meeting had included a trip to the former Burning Grounds. He discussed changes made to the retention pond and its conversion to a stormwater management system. He explained the water was not going down in the retention pond due to the clay layer, and there was a concern it would overflow onto the asphalt during heavy rains. He advised the solar panel project is underway and should be operating by the fall. He listed a number of reports which have been concurred upon by NJDEP and EPA. Mr. Gabel showed several pictures of the remediation and a photo of the solar panels.

Slide 12: Mr. Gabel gave an update on the major performance-based contracting effort for the Installation Restoration Program (IRP) and the Military Munitions Response Program (MMRP) discussed at previous meetings. He advised a decision had been made to have a small business contract and a large business or unrestricted contract.

Slides 13-17: Mr. Gabel stated the small business contract would include sites which have a signed Record of Decision. He displayed a list of the signed Records of Decision and a map showing the sites. He explained the small business contractor would be supporting long-term monitoring, land-use certification, land use control inspections, and the next five-year review in 2016. Mr. Gabel displayed a synopsis of the long-term monitoring sites and a synopsis of the remedial operations sites.

Slides 18 and 19: Mr. Gabel advised the large business or unrestricted contract would cover 96 remedial investigation concept sites under the IRP, MMRP, and Operational Range Assessment Program (ORAP). He stated this contract would also support the maintenance of the Administrative Record and the RAB meetings.

Slide 20: Mr. Gabel said the Army had agreed to conduct a Preliminary Assessment on 35 miles of abandoned railroad line at Picatinny, and this work will be part of the new contract. He advised there would be a contract option to also do a Site Investigation.

Slides 21 - 27: Mr. Gabel discussed a Department of Defense initiative, ORAP, which is looking at operational ranges and whether there is a potential for a release or potential threat of release of munitions to an off-range area that creates an unacceptable risk. He advised a Phase I Assessment was performed at Picatinny in 2007-2008, and a Phase II Assessment was conducted from 2012 to November 2014. He said NJDEP and EPA concurred with the Army that six of the areas identified in the assessment require further evaluation of the off-range areas, not the ranges themselves. In response to a question for Mr. Hiler, Mr. Gabel said "off-range" means areas still on Picatinny. Mr. Gabel advised the large business/unrestricted contract will include developing a Site Investigation for the six off-range areas.

Mr. Gabel advised six on-site Site Investigations will be completed by the Army, but these Site Investigations are not funded by environmental restoration funds, the documents will not be shared with or reviewed by the regulators, nor are the investigations covered under the agreement with EPA or the Defense State Memorandum of Agreement; therefore, they will not be part of the RAB's agenda or RAB discussions.

Slide 28: Mr. Gabel discussed field work that will be conducted along the Eastern Edge of Green Pond Brook to address NJDEP comments. He noted the contract would have an option to conduct a remedial investigation/feasibility study.

Slide 29: Mr. Gabel stated the Lakes Group of sites will be included under the new contract to complete a Feasibility Study with an option to develop a Proposed Plan, Record of Decision, and Remedial Action.

Slide 30: Mr. Gabel discussed the 600 Hill Waste Pit which will be included under the new contract to complete a Feasibility Study with an option to advance to Remedial Action.

Slide 31: Mr. Gabel displayed a map showing the MMRP sites.

Slides 32-34: Mr. Gabel said the new contract goal for the co-located Former Mortar Range and Former Skeet Area is to have a final Feasibility Study with an option to advance to Remedial Action. He noted the new contract goals for the Shell Burial Grounds and other Munitions Response Sites is similar, with an option to advance to the Record of Decision.

Slides 35-39: Mr. Gabel discussed the Non-Lakes Group of sites and stated the new contract goal is to have a signed Record of Decision. He noted the goal is similar for the 45 Site Groups A/B, PICA-111, PICA-207, and the 3 Site Group.

Slides 40-41: Mr. Gabel gave an update on the No Further Action with Monitoring of Land Use Record of Decision. He advised five sites discussed in the Proposed Plan were removed based on EPA and NJDEP comments; four sites will now be addressed in PICA-207 and one site is ineligible as it is an active range. He advised notice of the signing of this Record of Decision was

included with the notice of the RAB meeting. Mr. Gabel showed a chart listing the sites included in the Record of Decision.

Mr. Hiler asked how long the period of performance will be for the new contracts, and Mr. Gabel said the contracts would be for five years. Mr. Gabel said the small business contract will be awarded by June; several months will be needed to get approved sampling and health and safety plans in place.

Slides 42-43: Mr. Gabel said unexploded ordnance support and avoidance continues for construction projects and displayed a list of actions since the previous meeting.

Slide 44: Mr. Gabel advised the 2014 Installation Action Plan is on the web site, and the 2015 plan is under development.

Next Meeting

Mr. Gabel said the new contract would probably be awarded in late summer and suggested September or October for the next meeting. He said if the new contract was still not in place, he could use a purchase order for the needed support. He reminded the Board the annual election of the community co-chair would be conducted at the fall meeting.

A motion was made by Ms. Lisa Voyce, seconded by Mr. Tom Brackin, and unanimously approved to adjourn the meeting at 8:51 p.m.

Picatinny Restoration Advisory Board Meeting
April 30, 2015
Pending/In Progress Action Items

Date Created	Action Item	Person Responsible	Status
April 2015	Schedule next Board meeting for September or October.	Ted Gabel	Pending
April 2015	Provide comments to Ms. Harris on Charter.	All	Pending
April 2015	Advise RAB when new web site is live.	Ted Gabel	Pending